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AHL'S ADAPTABLE POROUS SPLINTS:

WITH

DIRECTIONS

FOR

THEIR EMPLOYMENT IN FRACTURES AND OTHER
SURGICAL LESIONS.

—
ILLUSTRATED.
—

New Edition

PUBLISHED BY
DR. DAVID AHL,
NEWVILLE, CUMBERLAND CO., PA.

1875.

Ahl, David

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NOTICE.

The ADAPTABLE POROUS SPLINTS of Dr. Ahl are manufactured *only* by Dr. DAVID AHL, Newville, Cumberland Co., Pa., the inventor and patentee. The price of a complete set, embracing fifty (50) pieces—twenty-five for adults and twenty-five for children—is thirty dollars (\$30 00). They will be sent to any express station for this amount, collectable on delivery (C. O. D.). Such a set is adapted to the treatment of any fracture. The different pieces are as follows:—

	ADULTS.	CHILDREN.
Inferior maxillary	1	1
Clavicle	1	1
Shoulder-caps	1	1
Humeral	2	2
Elbow (right and left)	2	2
Radial “ “ “	2	2
Ulnar “ “ “	2	2
Femoral	4	4
Anterior knee-joint (right and left)	2	2
Posterior “ “ “	2	2
Anterior tibial “ “ “	2	2
Posterior fibular “ “ “	2	2
Straight pieces (for fingers, toes, &c.)	2	—
Club-foot	—	2
	25	25

☞ LOCAL AGENTS WANTED.

Address—

DR. DAVID AHL,
Newville, Cumberland Co., Pa.

AHL'S ADAPTABLE POROUS SPLINTS.

No branch of surgery causes the physician more anxiety and more frequently leads to suits of malpractice, and consequent loss of time, money, and reputation, than the *treatment of fractures*. The difficulties are to preserve perfect adjustment of the extremities of the fractured bones, control the inflammatory symptoms, and maintain the action of neighboring joints.

The SPLINTS which have heretofore been used for this purpose, whether of wood, tin, gutta percha, leather, wire, plaster of Paris, or binder's board, have given so little satisfaction that the best treatises on surgery yield none of them any warm praise. Wood is hard and unyielding, and liable to produce abrasions and ulcerations from pressure; gutta percha is heating, is softened by warm water dressings, and emits a disgusting odor; leather is also softened by water, and soon contracts an unpleasant odor; binder's board is stiff and unyielding as well as difficult to adapt to rounded surfaces; wire splints Professor Gross justly stigmatizes as "unmanageable;" plaster of Paris, so much a favorite with many surgeons, is inconvenient and painful in application, requires a tedious time to harden, and is softened by water dressings; tin is too difficult to manipulate and adjust, and its sharp edges cause pain. Nearly every apparatus for fractures, moreover, either shuts the limb up in an awkward box, or suspends it from the ceiling, or in some other way confines the patient in an uncomfortable position, and greatly interferes with the motion and exercise essential to promote nutrition, and to favor a speedy and satisfactory cure.

The only splints which fulfil every indication in the case of fractures, whether simple or complicated, and which are free from all these objections, are

The Adaptable Porous Splints,

invented by Dr. Ahl. They have been tested extensively in both civil and military practice for a number of years, and have been indorsed and recommended in the most unqualified manner by the most distinguished surgeons of America, among whom we mention the late Dr. VALENTINE MOTT, of New York; Professor JAMES R. WOOD; Prof. SAMUEL D. GROSS, of the Jefferson Medical College; Prof. JOSEPH PANCOAST; Prof. LOUIS A. SAYRE; Prof. FRANK H. HAMILTON, the eminent author of the Treatise on Fractures and Dislocations; Dr. WASHINGTON L. ATLEE, of Philadelphia; Prof. N. R. SMITH, of Baltimore, and many others whose letters will be found at the close of this pamphlet.

It is not too much to say of these appliances that with them the practitioner—no matter how rusty his anatomical knowledge—*cannot fail* to treat fractures with complete success, because they are so moulded to the form of the healthy limb that when once applied they *render impossible* any deviation from the normal shape and length. At the same time, their *porosity* allows the free application of cold or warm-water dressings; they permit passive motion by their *flexibility*; they are perfectly adapted to the contour of the limb, and hence promptly relieve the pain caused by unadjusted fragments; and as they are also light, soft, odorless, durable, and, finally, the *cheapest ever put in the market*, they seem to fill the ideal of a surgical splint as closely as can be imagined.

Among other high testimony to their value is the satisfaction they gave to army surgeons during the late war. Over two thousand sets were bought and issued by the Medical Department U. S. A., and were found to answer the purpose admirably, although at that time the processes of manufacture were much less perfect than they now are. They are still the adopted splint of the U. S. Army, new orders for them having lately been received.

Description of the Adaptable Porous Splints.

The splints are made of a tough, flexible material, about as thick as heavy binder's board, and are moulded to the perfect form of the limbs over models. They can be *adapted* at will to limbs of various sizes by immersing the splint in boiling water and then fitting it to the part, which is protected by a roller of muslin saturated with cold water. They are, however, not in the least injured,

nor is their consistency altered by the continued application of water as hot or as cold as the skin can bear. Their *flexibility* enables them to accommodate themselves to the increase or reduction of the swelling, and by exerting a gentle and equable pressure to hasten its disappearance.

When once fitted to the limb they are not easily displaced or loosened. The patient can move about and change his position without pain or injury, while the muscular structure in the fractured limbs is maintained in perfect quiet. Hence they are invaluable when persons with serious fractures have to be transported long distances, and also when the general health will suffer from confinement to bed. It is one of the most satisfying proofs (both to physician and patient) of the perfection of these splints to witness how promptly the pain disappears when the fractured limb is snugly encased in them. There is no necessity to wait for hours or days till the inflammation is passed, as is sometimes recommended. Nor is the physician exposed to the impertinent interference of officious outsiders in loosening bandages and disarranging the fracture on the plea of relieving pain.

Their *porosity* is a peculiar and a valuable property. While the material is firm and insoluble, it permits readily the passage of air and fluids; so that, on the one hand, the heat from the inflamed surface, the perspiration, and the morbid exhalations are not confined, to the detriment of the patient, as in every other kind of splint, but pass off freely; and, on the other hand, lotions of cold or warm water, medicated or not with alcohol, carbolic acid, arnica tincture, solutions of the sulphites, etc., can be constantly applied without disturbing the dressings. This, it will readily be seen, is a *most invaluable* property when the parts are bruised, lacerated, filled with extravasated blood, or erysipelatous, and give these splints a conspicuous advantage over all others.

Nothing is more injurious in treating fractures than the necessity of removing the splints in order to dress or examine the limb. With these splints this is *never necessary*. Lotions and water dressings can be applied *through* them; their flexibility does not allow congestion, cedema, or gangrene from stoppage of the arterial circulation; the bones *must be* in place, for the limb is steadily kept at normal size and length, and for the same reasons ulcerations from pressure are unknown, and if the fracture is complicated the material can be readily cut or pared with a knife, so as to leave

a fenestra or opening through which the external wound can be dressed. Each splint adjusts itself as nicely to the limb as the scabbard to the sword, and there is no need of weights, or pulleys, or fracture boxes, or swings, or of six weeks in bed. You need not take off the splints till you are ready to discharge the patient, and you need not give yourself five minutes' anxiety as to the result.

This *flexibility* gives these splints a peculiar advantage in treating injuries near joints. Here the danger is that the joint will become ankylosed, or partially so, owing to the immobility in which it is kept. But these splints, when bent at an angle, are just flexible enough to allow passive motion to be exercised to sufficient extent, without in the least disturbing the shafts of the bones.

The difficulty of *extension and counter-extension* is happily met by these splints. Closely fitting the limb both in its circumference and in its length, they prevent the spasmodic action of the muscles, the overriding of fragments of bone, and the consequent deformity. If the limb is firmly and gently held in its normal shape and length no deformity can possibly result, and this the ADAPTABLE SPLINTS do in the most perfect manner. The varying contour of the limb itself, and the tuberosities of the bones in the vicinity of the joints, offer all the points for extension and counter-extension which are necessary. No pads, cushions, sand-bags, or other clumsy contrivances are needed, and the heat, inflammation, and confinement to bed which these enforce, are happily escaped. So perfect is the support given that a surgeon of large experience writes us: "With these splints once applied, any other limb, or part of a limb, is as likely to be fractured as the fractured parts to be disturbed." What more could be asked?

With such appliances *false joints* are unknown. These nearly invariably arise from want of care either on the part of the physician or the patient. But kept in constant apposition as they are by these splints, the ends of the fractured bones cannot fail to unite, even where the system is debilitated and the vascular action of the limb torpid. Indeed, we have repeated cases where false joints were *cured* by exciting proper inflammation at the fractured extremities, and then adjusting these splints to the limb.

These qualities peculiarly recommend these appliances for the

Treatment of Fractures in Children.

Every physician knows how unsatisfactory it is to treat fractures in children by ordinary splints; how ready the parents are to loosen the bandages and disarrange the apparatus if the child complains of pain; and how ready, also, to throw the whole blame on the medical attendant if the result is bad, owing to their folly. The temptation to this is removed by the freedom from pain which attends the use of the ADAPTABLE SPLINTS, their lightness and coolness, the impossibility of disturbing the fracture when once adjusted, and the soft and agreeable feeling they impart. For these reasons we manufacture a separate and complete set for children.

Other Surgical Lesions.

In whatever contingency a limb needs perfect rest and mechanical support, these splints will be found far superior to any others yet invented. In sprains and injuries, such as rupture of the ligaments of a joint, and in diseases of the articulations, of whatever nature, where motion is injurious, they can be used with great advantage. They often afford great relief in incised, gunshot, and other wounds of the muscular system; and in varicose veins they have been found of value.

How to Apply the Splints.

The ADAPTABLE SPLINTS are sold in sets, each piece being already moulded on a perfect model of the human limb, slightly above the average in size, an allowance being made for the swelling which accompanies a fracture. In the large majority of cases they are therefore ready for immediate use, and require no adaptation. When, however, it is wished to alter their form, they must be immersed for half a minute or so in water at 212° Fahrenheit, or else sprinkled with water and then heated by running a hot flat-iron over them. This renders them perfectly pliable for a few seconds during which time they should be brought to the desired form, and then plunged in cold water. They at once become as firm as ever.

When they are moulded over a limb, it must be protected by a bandage soaked in cold water, so that the heat is not painful. Generally it is enough to approximate or to separate the longitudinal edges of the splints in order to adapt them to any limb.

The edges can readily be pared with a knife, and openings cut over wounds.

Having brought the splint to the desired shape, lay two or three thicknesses of old linen or muslin smoothly over its internal surface before applying it. *Do not bandage the limb.* It is not good surgery. Retain the splint in place by an ordinary roller bandage. This can be tightened as the swelling diminishes, without removing the splints or disturbing the fracture.

If the limb is fractured in several places—as, for instance, above and below the elbow or knee—the proper splints can be applied, the one overlapping the other, thus forming a complete case for the limb. Passive motion of the joint can be maintained, water or medicated lotions can be applied, and wounds of the soft part can be examined and dressed without disturbing the splints, and without allowing for a moment the limb to depart from its normal shape and length. Deformity and ununited fractures thus become *impossible*, and many fractures of the comminuted and complicated varieties can be treated with perfect success by these splints which, without them, would require amputation.

We know by experience that every physician who uses these splints once will *never again be without them.* They will often repay ten times their cost in the first year, in the greater success of the treatment of surgical lesions, and the consequent increase of practice and mental satisfaction which the physician will enjoy.

DETAILED DESCRIPTION OF THE SETS.

What Constitutes a Complete Set.

* The complete set of ADAPTABLE POROUS SPLINTS contains twenty-five (25) pieces for adults, and twenty-five (25) pieces for children, making in all fifty (50) pieces. They weigh altogether not quite five pounds, and are neatly packed in nests in a light wooden box with a firm fastening. This allows them to be conveniently transported in the physician's carriage. The complete set costs thirty (30) dollars; and if at any time a piece is lost or damaged, it will be replaced, at a trifling expense, if desired. If a surgeon wishes any special form of apparatus constructed of the same mate-

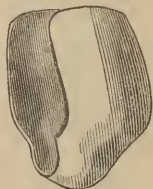
rial, it can generally be made for him by addressing the publishers of this circular.

It will be seen that *every fracture* treated by apparatus can be at once and satisfactorily placed and retained in position by one or other of the splints in these sets. A set, therefore, forms a complete outfit for a physician.

Splints for the Superior Extremity.

Lower Maxillary Splint (Fig. 1).—This splint embraces the entire chin, and forms a complete support to the fractured part, while at the same time it allows, by its flexibility, sufficient motion to open the mouth slightly to take food and drink. They are more comfortable than the gutta-percha splint. Retain it by Barton's bandage.

Fig. 1.



Inferior Forearm Splint for the Ulna (Fig. 2), and *Superior Forearm Splint for the Radius* (Fig. 3).—These two splints are intended for all fractures of the forearm, and also for sprains and dislocations at the wrist-joint, complicated or not with fracture. Very often actual fractures of the head of the radius or ulna are diagnosed as sprains, and result in semi-ankylosis. These cases, even when of several months' duration, can be treated with complete success with these splints. They are also admirably adapted to treating Barton's fracture, fulfilling every indication as well as Bond's splint, requiring no pads or compresses, and being less likely to be followed by stiffness of the joint. They may be used either in combination or alone. As the radius and ulna are more liable to fracture than any other bones, ready made splints are very convenient.

Fig. 2.

Fig. 3.

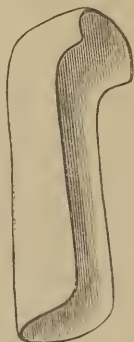


Elbow Splint (Fig. 4).—This is for fractures and dislocations of the radius, ulna, and humerus at or near the elbow-joint. In combination with the Inferior and Superior forearm splints, it is adapted to all fractures of the ulna and radius at the middle or upper third, or compound comminuted fractures of the same bones.

Where both radius and ulna are fractured, bring the parts into contact, then apply splints Figs. 2, 3, and 4, and bandage over all from the hand to the shoulder. If the fracture is comminuted, cut a part or parts out of the splints, corresponding to the points of comminution, and bandage around them. The wounds can easily be dressed without disturbing the splints or bandages. As the swelling is reduced, tighten the bandages, as the splints accommodate themselves to the reduction. The Elbow Splint is at an obtuse angle, to prevent the lapping of soft parts, and as being most natural to sling.



Fig. 5.



Shoulder Splint (Fig. 5).—Any fracture of the humerus can be successfully treated by a combination of the shoulder and elbow splints. The shoulder splint fits over the exterior face of the shoulder, and it is to be used with the short, slightly curved piece to be applied to the opposite surface.

Splints for the Inferior Extremity.

Anterior Tibia Splint (Fig. 6).—This splint is intended for fractures of the tibia proper, and especially for fractures, either simple or compound, in the vicinity of the ankle-joint. It reaches from the knee-joint to the instep, and embraces the ankle-joint perfectly. Fractures of the malleoli will be readily treated by combination of this and the following piece. There are two splints of this kind to each set.

Fig. 6.

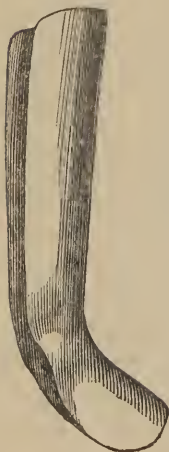


Fig. 7.



Posterior Fibula Splint (Fig. 7).—This splint is suited to treating fractures of the fibula proper, and also in the vicinity of the ankle-joints, either simple, compound, or comminuted. Figs. 6 and 7 are combined for a complete apparatus for treating

bad compound fractures of the tibia and fibula, either of the upper, middle, or lower third, and at the ankle-joints. There are two splints to each set, one for the left and one for the right limb.

Fig. 8.



Anterior Knee-joint Splint (Fig. 8).—This splint is adapted to treat fractures of the tibia, fibula, and femur near the joint, and also, in connection with the anterior and posterior tibia and fibula splints, to treat all fractures of those bones. There are two splints to each set, one for the right and one for the left knee-joint.

Fig. 9.



Posterior Knee-joint Splint (Fig. 9).—This splint, in connection with the anterior knee-joint splint, treats fractures of the tibia, fibula, and femur near the knee-joint, and also

the upper third of the fibula and tibia, and the lower third of the femur; and also, in connection with the anterior and posterior tibia splints, treats all fractures of those bones. There are two splints to each set, one for the right and one for the left limb. These splints can be used for the tibia and fibula also, when fractured about the middle of the shaft. Figs. 8 and 9 are used also for fracture of the patella, and are admirably adapted to keep it in position.

Fig. 10.



Club-foot Splint for Children (Fig. 10).—This splint is intended for treating the club-foot of children after operation, which it does very successfully. There are two club-foot splints for each set.

If the application of these splints be commenced soon after birth where this deformity is present, and so adapted (by the foot being bent sidewise at an angle to the leg portion) that they exert a constant yet moderate pressure toward the normal line of the limb, the deformity may, in some instances, be remedied without an operation.

Femoral Splints (Fig. 11).—In treating fractures of the middle and upper third of femur, unquestionably “the most simple and efficient means” is, as Mr. Erichsen says (*Science and Art of Surgery*, edited by Dr. Ashhurst, Philadelphia, 1870, p. 278), the treatment by weights and short splints, as perfected by Dr. Gurdon Buck, of New York. Extension is maintained by a weight attached to a cord which is fastened to a gaiter and passes over a pulley at the foot of the bed. The proper weight for an adult is about seven pounds. Counter-extension is maintained by a perineal band fastened to the head of the bedstead, or merely by the weight of the body, the foot of the bed being elevated. It is essential that the muscular structure should be compressed and the fragments maintained in coaptation by the four short slightly curved femoral splints. The method of applying them will readily be seen in the annexed cut (Fig. 11).

Fig. 11.

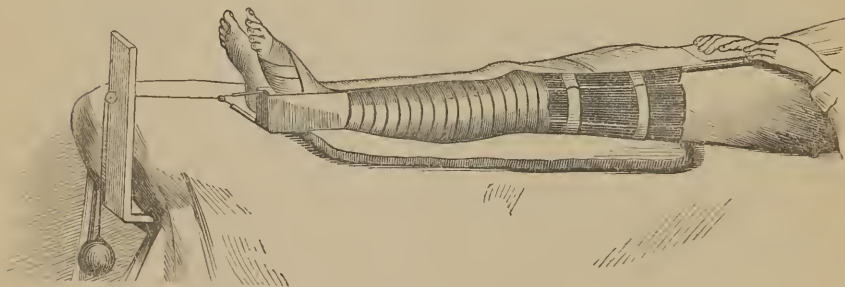
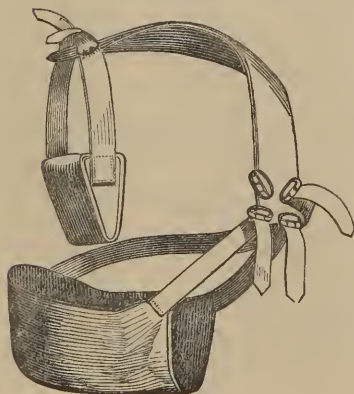


Fig. 12.



Fracture of the Clavicle (Fig. 12).

—This frequent injury will be most satisfactorily treated by Levis' modification of Fox's apparatus. This consists in brief of a trough for the forearm, an axillary pad, and a broad strap over the sound shoulder. We supply the trough perforated at the proper points for the attachment of the necessary straps. The rest of the apparatus can readily be improvised.

TESTIMONIALS.

We take pleasure in laying before the medical public the following opinions of eminent American surgeons on the ADAPTABLE POROUS SPLINTS, and we feel a just pride in adding that *in no single instance* has an unfavorable opinion been expressed upon them by any medical man who has examined and used them.

From LEWIS A. SAYRE, M. D.,

Professor of Orthopedic Surgery in Bellevue Hospital Medical College, Surgeon to Bellevue Hospital, etc. etc.

I have examined with great interest, and tested with the utmost satisfaction, the ADAPTABLE POROUS SPLINTS of Dr. David Ahl. They supply a necessity in the treatment of fractures, deformities, and diseases of the joints, which has never before been filled, and which I have long felt and endeavored to supply with leather, but could never do it so satisfactorily as with Dr. Ahl's Splints. From the easy manner in which they can be moulded with the most perfect accuracy to every inequality of the part applied, they will do away, in the majority of cases, with the necessity of all complicated apparatus for extension and counter-extension, and while they give much more comfort to the patient I am satisfied they will give greater satisfaction to the surgeon, as you can have no sloughing from inequality of pressure.

LEWIS A. SAYRE, M. D., *Prof. Orthopedic Surgery,*

Bellevue Hosp. Col. and Surgeon Bellevue Hosp.

From FRANK H. HAMILTON, M. D.,

Professor of Fractures and Dislocations in the Bellevue Hospital Medical College, author of "A Treatise on Fractures and Dislocations," etc.

Having examined carefully the ADAPTABLE SPLINTS invented by Dr. David Ahl, I feel warranted in recommending them to the profession as superior to any other manufactured splints now in use. They possess *all* the essential qualities of a good splint, having firmness, pliability, and lightness.

FRANK H. HAMILTON, *Prof. Military Surgery and*

Fractures and Dislocations, Bellevue Hosp. Col.

From JAMES R. WOOD, M. D.,

Surgeon to Bellevue Hospital, Professor of Surgery in the Bellevue Hospital Medical College, Chairman of the Surgical Section of the New York Academy of Medicine, etc. etc.

I have examined Dr. David Ahl's ADAPTABLE POROUS SPLINTS, and entertain a very favorable opinion of them. I know they must come into very general use,

being light, convenient, and easy of adaptation, and are well deserving the attention of surgeons. I consider them a *most indispensable* article for the treatment of fractures.

JAMES R. WOOD, M. D.,
Surg. to Bellevue Hosp., Prof. Surgery, etc.

From ALEXANDER B. MOTT, M. D.,
Professor of Surgical Anatomy in Bellevue Hospital Medical College, formerly Surg. U. S. Vols., etc.

It gives me pleasure to recommend to the profession the SPLINTS invented by Dr. David Ahl. They have *many advantages* over the most approved kind now in use, being light, and readily applied to fractures and injuries of the limbs, etc.

ALEX. B. MOTT, M. D.,
Prof. Surgical Anatomy in Bellevue Hosp. Col.

From the late VALENTINE MOTT, M. D., LL. D.,
Emeritus Professor of Surgery in the University of New York, President of the N. Y. Academy of Medicine, etc. etc. etc.

I have examined the SPLINTS of Dr. David Ahl, for fractures and other injuries of the limbs, and am satisfied that they are a valuable addition to our appliances for their relief.

VALENTINE MOTT.

From J. M. CARNOCHAN, M. D.,
Professor of Clinical Surgery in the New York Medical College, Surgeon-in-Chief of the State Hospital, Health Officer to the City and Port of New York, etc.

From what I have seen of the qualities of the ADAPTABLE POROUS SPLINTS of Dr. David Ahl, I take pleasure in giving my testimony in favor of the invention. From the facility with which they can be moulded to surfaces unequal or irregular, and from the fact that moisture does not interfere with their solidity, they must take the place, in many instances, of leather, pasteboard, and other materials which are in use in the treatment of fractures.

J. M. CARNOCHAN, *Prof. of Clinical Surgery*
N. Y. Med. Col., Surgeon-in-Chief to the State Hosp., etc.

From WASHINGTON L. ATLEE, M. D.,
of Philadelphia, ex-President of the Medical Society of Pennsylvania.

It affords me very great pleasure to be able to recommend the SPLINTS invented by Dr. David Ahl. I know of *none* more readily and speedily adjusted, more capable of properly securing and maintaining in exact apposition the fractured portions of bone, more comfortable to the patient, and more satisfactory to the surgeon, and none the results of which are more successful.

WASHINGTON L. ATLEE, M. D.

From JOSEPH PANCOAST, M. D.,
*Professor of General, Descriptive and Surgical Anatomy in the Jefferson Medical
 College, Philadelphia.*

I have great pleasure in recommending the ADAPTABLE SPLINTS invented by Dr. David Ahl, to the favor of the profession.

JOSEPH PANCOAST.

From SAMUEL D. GROSS, M.D.,
*Professor of Surgery in the Jefferson Medical College, Author of "A System of
 Surgery," and ex-President of the American Medical Association.*

"Sets of SPLINTS adapted to all regions of the body, and put up in portable cases, have lately been introduced to the profession by Dr. Ahl, and are likely, from their convenience and cheapness, to come into general use. They are very light and flexible, are not affected by cold or warm dressings, and are easily moulded to every inequality of the surface of the parts to which they are applied."
 —*System of Surgery*, vol. i., p. 867, edition of 1866.

From NATHAN R. SMITH, M. D.,
Professor of Surgery in the Medical Department of the University of Maryland, etc. etc.

I think Dr. Ahl's ADAPTABLE SPLINTS a very useful article, and should think from their lightness, simplicity, etc., that they should come into general use.

N. R. SMITH.

From CHRISTOPHER C. COX, M. D., LL. D.,
*Editor of the National Medical Journal, Professor of Anatomy in the Georgetown
 Medical College, Washington, D. C.*

I have carefully examined the ADAPTABLE SPLINT of Dr. D. Ahl, and have no hesitation in recommending it for its ready adaptation, and its faculty of retaining fractured bones in perfect apposition. It deserves to be introduced into general use.

CHRIS. C. COX.

From GEORGE E. COOPER, M. D., U. S. A.,
*Formerly Medical Director to the Army of the Southwest, at present (1871) Med.
 Director to the Department of the Columbia.*

Dr. DAVID AHL, Sir: I have used your ADAPTABLE SPLINT in the field and in hospital practice, and have found it all that could be asked for, and all that you demand for it.

Yours truly, GEO. E. COOPER, Surg. U. S. A.

From B. VAN DER KIEFT, M. D.,
Formerly Surgeon U. S. Vols. in charge of the General Hospital, Annapolis, Md.

I take great pleasure in recommending Dr. David Ahl's ADAPTABLE POROUS SPLINTS. I have used them on the field and in the hospital, and in the transportation of wounded, and consider them much superior to any splints in use. They fill a vacuum that has long been felt in army and civil practice.

B. VAN DER KIEFT, Surg. U. S. Vols.

From PAUL F. EVE, M.D.,
*Ex-President of the American Medical Association, and Prof. Operative and Clinical
 Surgery, University of Nashville, Tenn.*

I have used Dr. Ahl's ADAPTABLE POROUS FELT SPLINTS in cases of fractures, and have found them well adapted particularly for cases of emergency, and nearly all fractures of the extremities are such. I do not see how I could well do without them, and they must prove a great blessing to patients, and relief to surgeons.

PAUL F. EVE, M.D., *Prof. Operative and
 Clinical Surgery, University of Nashville.*

From S. B. KEIFFER, M.D.,
President of the Medical Society of the State of Pennsylvania.

DANIEL AHL, M.D.

Dear Dr.: After having used your SPLINTS in almost every form of fracture, simple, comminuted, and compound, I feel constrained to write to you, in order to express my delight at their utility. They are so simple, so durable, and yet so admirably adapted to fulfil every indication in fractures and dislocations, that I would not discharge my sense of duty did I not express to you my obligations for their introduction. In not a single instance have I failed to accomplish with them all that has been accomplished by other appliances; and the comfort and convenience to the patients have been so marked, that in some instances persons suffering have doubted the nature and extent of their injury. Having my splints always at hand, I find, besides the saving of time, myself spared much of the annoyance and vexation usually incident to surgical practice. With my full endorsement as to their utility, and with the assurance that any one who has ever used them will not do without them, I congratulate you on the success of your achievements. With kind personal regards, I remain, Doctor,

Yours, very truly,

S. B. KEIFFER.

From W. G. STEWART, M.D.,
President of Cumberland County, Pa., Medical Society.

I have used Dr. David Ahl's ADAPTABLE POROUS FELT SPLINTS in a large number of fractures, both simple and compound, for the last seven years, with uniform success in every case. They fulfil all the indications of successful surgery, and are indispensable to the successful treatment of fractures. Under no circumstances would I do without them. In fractures near joints they are absolutely necessary to preserve the integrity of the joints. I consider them indispensable to the surgeon, and every physician and surgeon should have a set.

W. G. STEWART, M.D., *President Cumberland Co. Medical Society.*

From Prof. R. J. LEVIS, M.D.,
Surgeon to Pennsylvania Hospital, etc.

I have used Dr. David Ahl's ADAPTABLE POROUS FELT SPLINTS, and I am highly pleased with them. In all fractures they are superior, and in fractures near the joints they are indispensable to produce perfect results.

Prof. Levis, at the meeting of the Medical Society of Pennsylvania, at Pottsville, presented the ADAPTABLE POROUS SPLINTS to the society, and endorsed them very highly, and pronounced them a very valuable addition to the means now resorted to in the management of fractures.

From GUSTAV C. E. WEBER, M. D.,

Professor of Surgery in the Charity Hospital Medical College, Cleveland, Ohio, etc.

I have used in a number of cases of fracture Dr. Ahl's ADAPTABLE POROUS SPLINTS, and have invariably been highly pleased with the facility of application and efficiency in fulfilling all the indications which presented themselves. In a large class of fractures, especially those near the joints, these splints are superior to anything that has been devised before. In my opinion no practising surgeon should be without them. A single application will satisfy him regarding their value.

GUSTAV C. E. WEBER, *Prof. of Surgery, etc.*

From PROCTOR THAYER, M. D.,

Prof. of Surg. in the Cleveland Med. College, etc.

From what I have seen of the ADAPTABLE POROUS SPLINTS, I fully agree with Dr. Weber as to their value.

P. THAYER, *Prof. of Surgery, etc.*

Besides the above we have equally flattering testimonials to the value of these SPLINTS from the late Surgeon-General, C. S. Finley, M. D., Prof. W. Parker, of New York, Profs. A. C. Post, John Watson, and Gurdon Buck, of the same city, Prof. N. S. Schneider, and W. H. Jones, of Cleveland, Prof. Starkey, of Philadelphia, and in short from every surgeon who has given them a trial.

Dr. AHL respectfully calls the attention of physicians to the fact that every physician to whom he has exhibited these Splints has highly endorsed them; and that, in no instance, after having bought them, has he hesitated to declare his entire satisfaction with them. Dr. Ahl has received hundreds of complimentary letters relative to their utility in all cases.

All orders must be addressed to Dr. DAVID AHL, Newville, Cumberland County, Pa.



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